DOCUMENT RESUME

ED 471 436 CG 032 089

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TITLE	A Study of Perfectionism, Attachment, and College Student Adjustment: Testing Mediational Models.
PUB DATE	2002-08-00
NOTE	51p.; Paper presented at the Annual Conference of the American Psychological Association (110th, Chicago, IL, August 22-25, 2002).
PUB TYPE	Information Analyses (070) -- Speeches/Meeting Papers (150)
EDRS PRICE	EDRS Price MF01/PC03 Plus Postage.
DESCRIPTORS	*Attachment Behavior; *Cognitive Processes; *College Students; Higher Education; Mediation Theory; Models; Predictor Variables; *Psychological Patterns; *Student Adjustment
IDENTIFIERS	*Perfectionism

ABSTRACT

Mediational models predicting college students' adjustment were tested using regression analyses. Contemporary adult attachment theory was employed to explore the cognitive/affective mechanisms by which adult attachment and perfectionism affect various aspects of psychological functioning. Consistent with theoretical expectations, results indicated a significant influence of cognitive/affective factors in the relationship between attachment and adjustment, and in the relationship between perfectionism and adjustment in college students. Additionally, college cognitive/affective factors significantly influenced the relationship between attachment and psychological distress, and the relationship between perfectionism and psychological distress. (Contains 79 references and 6 tables.) (Author)

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A Study of Perfectionism, Attachment, and College Student Adjustment: Testing Mediational Models

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Paper presented at the Annual Conference of the American Psychological Association, August, 2002, Chicago, IL. We are grateful to Yu-Rim Lee and Steve Pence for their assistance on various aspects of this project. Correspondence concerning this paper should be sent to Joan Pfaller, Department of Counseling, Educational Psychology, and Special Education, 440 Erikson Hall, Michigan State University, East Lansing, MI, 48824-1034. Electronic mail may be sent via the internet to pfaller@msu.edu.

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Abstract

Mediational models for predicting college students' adjustment were tested using regression analyses. Contemporary adult attachment theory was employed to explore the cognitive/affective mechanisms by which adult attachment and perfectionism affect various aspects of psychological functioning. Consistent with theoretical expectations, results indicated a significant influence of cognitive/affective factors in the relationship between attachment and adjustment, and in the relationship between perfectionism and adjustment in college students. Additionally, cognitive/affective factors significantly influenced the relationship between attachment and psychological distress, and the relationship between perfectionism and psychological distress.

A Study of Perfectionism, Attachment, and College Student Adjustment: Testing Mediational Models

During the past 25 years, the construct of perfectionism has received increasing attention from researchers and has been recognized as a significant predictor of psychological adjustment. Yet, despite the growing research in this area, no single definition of perfectionism exists. Hamachek (1978), for example, described two types of perfectionists, the "neurotic" and "normal" types. In contrast, later studies by Frost, Martin, Lahart, and Rosenblate (1990) distinguished between maladaptive and adaptive perfectionism.

Studies of perfectionism led to a view of this construct as multidimensional as several measures were developed. In fact, three multidimensional perfectionism scales were created by independent groups of researchers. A multidimensional perfectionism scale was created by Frost and colleagues in 1990, while Hewitt, Flett, Turnbell-Donovan, and Mikail formulated their measure in 1991. The Frost et al. measure (F-MPS; 1990) contains six subscales that measure excessive concerns about mistakes, personal standards, and self-doubt. The Hewitt et al. scale (HF-MPS; 1991) yields information on self-oriented, other-oriented, and socially-prescribed aspects of perfectionism. A third measure of perfectionism, developed by Slaney, Rice, Mobley, Trippi, and Ashby (2001), is called the Almost Perfect Scale. This instrument assesses high personal standards, organization, and discrepancy between desired standards and the perception that one is not meeting them.

Researchers conducted factor analyses of the F-MPS (Frost et al., 1990) and the HF-MPS (Hewitt et al., 1991) and found "two conceptually unambiguous factors." The first factor was composed of items indicating concerns about making errors, doubts about one's behaviors, and overly critical relationships with parents. Frost, Heimberg, Holt,

Mattia, and Neubauer (1993) called this factor "maladaptive evaluation concerns" and noted it was significantly related to depression and negative affect. The second factor was related to "positive striving" as it measured high personal standards and organization. Although unrelated to depression, the second factor correlated significantly with positive affect, which was defined as recent feelings of energy or enthusiasm.

These findings support the view of perfectionism as a multidimensional construct with both negative and positive components (e.g. Rice, Ashby, & Slaney, 1998; Slaney, Ashby, & Trippi, 1995; and Terry-Short, Owens, Slade, & Dewey, 1995). More recent studies used multivariate cluster analyses to distinguish among types of perfectionists. Studies done by Parker (1997), Rice and Mirzadeh (2000), and Rice and Dellwo (2002) yielded similar results in that there were three "clusters" of perfectionists, adaptive and maladaptive, with a third "cluster" of non-perfectionists.

Despite the delineation of perfectionism subtypes, there is a paucity of research examining the etiology and developmental antecedents of perfectionism. The lack of clear etiology underscores the need for a conceptual framework capable of linking the multiple psychological factors associated with the different subtypes of perfectionism. In our view, contemporary adult attachment theory offers a viable conceptual framework from which the relationship between perfectionism and adjustment can be further explored. Although a complete discussion of the developmental models of perfectionism is beyond the scope of this paper, both the development of perfectionism and the development of attachment orientations are theoretically influenced by early familial interactions (Lopez & Brennan, 2000; Rice & Mirzadeh, 2000). Furthermore, both perfectionism and attachment have been linked to adjustment outcomes. Thus, considered jointly, the predictive importance of perfectionism and attachment may provide essential information for the development

of interventions aimed at helping college student adjustment. In the following section, the key concepts and assumptions of adult attachment theory are discussed. Studies examining the relationship between adult attachment styles and various cognitive affective self-regulatory mechanisms, and studies examining the relationship between perfectionism and cognitive affective self-regulatory mechanisms, are reviewed.

Attachment Theory

According to attachment theory (Bowlby, 1969/1982,1988), beginning in infancy, individuals are biologically programmed to seek and maintain attachment relationships with caregivers. Attachment is defined as an enduring, emotional bond between two people. The goal of attachment behavior is to maintain feelings of security in the presence of endangerment, threat, or stress. During infancy, the child internalizes a cognitive representation of the infant-caregiver attachment relationship, referred to as an internal working model, that guides future interpersonal relationships and continues to be relevant throughout the lifespan. The characteristics of the internal working model are based on the quality of infant-caregiver interactions.

Primarily unconscious, the internal working model contains cognitive representations of self (positive or negative), other (positive or negative), and coping strategies for responding to threats to one's psychological security (Lopez & Brennan, 2000). The internal working model contains a schematic cognitive representation of the child-parent relationship (George, 1996) which functions to organize affect and shape self-esteem (Mikulincer, 1995). Internalization of a positive internal working model is fostered by sensitive and reliable caregiving by parental figures and leads to a secure attachment orientation. Secure attachment orientation is characterized by positive self

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representation and a view of others as available and dependable. In contrast, the internalization of a less favorable internal working model occurs as a result of inconsistently responsive, overcontrolling, or consistently rejecting early caregiving and leads to insecure attachment formation. Insecure attachment orientation is characterized by internalization of negative self-views (unlovable), negative views of others (withholding and unpredictable), or both general expectancies.

The internal working models underlying secure and insecure attachment orientations are outwardly manifested by an individual's "adult attachment style." Based on the self and other models contained within the internal working model, Bartholomew and Horowitz (1991) identified four types of adult attachment styles: secure, preoccupied, fearful, and dismissing. Secure attachment style involves both a positive view of self and positive view of other. A dismissing attachment style involves a positive view of self but a negative view of others. Preoccupied and fearful styles both involve a negative self model. However, while the preoccupied style involves a positive model of others, the fearful style involves a negative model of others.

Adult attachment styles, although potentially modifiable by disconfirming life events and experiences, are presumed to be relatively stable and enduring relationship orientations that are carried into adult relationships. Thus, attachment style is presumed to affect the course of development across the life span (Bowlby, 1988). Research throughout the last two decades has supported the usefulness of attachment theory beyond the childhood years, productively extending attachment theory to the study of adult functioning, and suggesting that attachment theory represents a useful framework for the study of transitional adjustment processes (Kenny & Rice, 1995).

Perfectionism, Attachment, and Adjustment

Many studies of college adjustment have emphasized the negative aspects of perfectionism and insecure attachment. Correlates for maladaptive perfectionism and psychological problems include depression (Blatt, 1995; Enns & Cox, 1999; Hewitt, Flett, & Ediger, 1996; Rice & Mirzadeh, 2000), low self-esteem (Preusser, Rice, & Ashby, 1994; Rice, Ashby, & Preusser, 1996; Rice et al., 1998), hopelessness and suicidal risk (Chang, 1998; Chang & Rand, 2000; Donaldson, Spirito, & Farnett, 2000), anxiety and worry (Alden, Bieling, & Wallace, 1994; Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Johnson & Slaney, 1996), and disordered eating (Cash & Szymanski, 1995; Minarik & Ahrens, 1996; Joiner, Heatherton, Rudd, & Schmidt, 1997; Vohs, Bardone, Joiner, & Abramson, 1999). Although the focus of perfectionism research is mostly on adverse consequences of this construct, there are studies correlating adaptive perfectionism with more advantageous criteria such as self-efficacy (Frost et al., 1990), positive affect (Frost et al., 1993), high self-esteem, academic adjustment (Rice & Mirzadeh, 2000), and conscientiousness, social ease, and achievement orientation (Parker, 1997).

Similarly, the relationship between attachment styles and various adjustment outcomes is a recurrent theme within the evolving attachment theory literature. Specifically, recent research has identified both interpersonal and intrapersonal factors associated with insecure attachment, including greater anxiety, depression, loneliness, shame proneness, and lower self-esteem (see Shaver & Clark, 1994; Shaver & Hazan, 1993 for reviews). Whereas insecure attachment has been linked to increased psychological distress (Kemp & Neimeyer, 1999), secure attachment has been linked to constructive coping skills (Mikulincer, Florian, & Weller, 1993). Securely attached

individuals tend to seek social support in times of duress; insecurely attached individuals tend to employ immature and maladaptive coping strategies such as splitting (Lopez, 2001).

The relationship between attachment styles, coping, and adjustment has garnered increased attention within the study of college students and adjustment to college. Vivona (2000), for example, found that securely attached late adolescents, in comparison to their insecurely attached peers, exhibited decreased levels of anxiety, worry, and depression. In the same study, women with insecure attachment orientations experienced diminished college adjustment and lower intimacy development. Furthermore, Brennan and Shaver (1995) reported that insecurely attached college students are more likely to use food, sex, or alcohol to cope with negative emotions than their securely attached peers. "Drinking to cope" and "bingeing under stress" are also associated with insecure attachment. Similarly, Kenny and Rice (1995) reported better college adjustment in multiple realms for securely attached students than for insecurely attached students.

Perfectionism, Attachment, and Cognitive Affective Processes

Because perfectionism and attachment are related to many psychosocial issues of college and university students (Rice & Mirzadeh, 2000), it is important to understand how these constructs affect students' adjustment and how they are related to other variables. Several models have been proposed that include an examination of cognitive-affective processes as mediators between perfectionism and adjustment and as mediators between attachment and adjustment.

Three models attempt to explain the role of stress in the association between perfectionism and adjustment. An early model, the cognitive theory of depression (Beck,

Rush, Shaw, & Emery, 1979), proposed that the influence of a perfectionistic self-schema on adjustment would become more evident as the schema was activated by perceived stress. In this model, stress was seen to be the initial predictor of adjustment and the effects of the stress were then mediated by perfectionism. A second model was proposed by Hewitt et al. (1996) who examined stress as a moderator in the relationship between perfectionism and adjustment. They found that as stress increased, only self-oriented perfectionists experienced an increase in depression. Results from this study were in contrast with results from the study by Chang and Rand (2000) in which negative effects of only socially-prescribed perfectionism occurred under high, but not low conditions of stress. The study done by Chang (2000) found partial support for a third model in which stress was the mediator of the influence of perfectionism on life satisfaction. Furthermore, when this study examined perfectionism and stress in the prediction of worry and negative affect, both direct and mediated effects were found to be substantial.

Recently, Dunckley et al. (2000) sought to explain how coping style is a means to influence perfectionism and emotional adjustment . They found that a measure of stress ("daily hassles"), avoidant coping style, and perceived social support were mediators of the association between "evaluative concerns" perfectionism (a subtype of maladaptive perfectionism) and emotional distress (a combination of anxiety and depression). Dunckley and colleagues (2000) found no support for coping or social support as a mediator between adaptive perfectionism (the subtype, "personal standards" perfectionism) and distress. However, personal standards perfectionism was significantly associated with an active style of coping. It is curious that coping style did not interact significantly with either dimension of perfectionism to predict distress. Stress, however, exacerbated distress, whereas social support reduced distress for both types of perfectionists (Dunckley et al., 2000).

In summary, several attempts have been made to explain the relationship between college students' adjustment and perfectionism. Researchers examined the potential role of stress (e.g. Chang & Rand, 2000) and coping style (e.g. Dunckley et al., 2000) as means to link these two concepts. At this point however, there is no unifying conceptual framework to add to our understanding of the cognitive and/or affective mechanisms underlying the development of maladaptive and adaptive perfectionism.

We believe adult attachment theory represents a potentially unifying framework from which to better our understanding of these cognitive affective processes. Several recent attachment theorists have maintained that attachment theory is primarily a theory of affect regulation (Kobak & Sceery, 1988). In fact, attachment research has consistently demonstrated that there are systematic differences in emotional experiences among individuals with different attachment styles (Fuendeling, 1998). Theoretically, the role of attachment styles in affect regulation can be traced back to the primary caregiver's responsiveness to the infant's needs and anxiety signals. Infants with secure attachment to their caregiver learn that expression of negative affect leads to caregiver intervention, which in turn lessens the immediate experience of negative affect. In contrast, insecurely attached infants' expression of negative affect is not responded to appropriately by the primary caregiver. The unresponsiveness of the caregiver leads to either hyperactivation or deactivation of the infant's emotional arousal system because the infant never fully receives adequate feelings of security through interaction with the primary caregiver (Fuendeling, 1998). Repeatedly, conclusions drawn from recent studies suggest that individuals with secure attachment styles exhibit an enhanced ability to deal with stress and negative emotions compared to those with insecure attachment styles (Kemp &

Neimeyer, 1999; Lopez & Brennan, 2000). One of the benefits of secure attachment appears to involve the ability to regulate affective and cognitive processes.

Although the underlying mechanisms of affective regulation have been largely unexplored, several empirical studies have found an association between adult attachment styles and specific cognitive processes. For example, recent studies have demonstrated that adult attachment style impacts both the encoding and processing of information regarding attachment figures, affect-laden events, and the self (Kobak &Hazan, 1991; Mikulincer, 1997; Mikulincer & Orbach, 1995). Whereas the general consensus indicates that insecure attachment results in a more negative, less differentiated, and less coherent self organization, secure attachment orientation appears to foster a more flexible and integrative cognitive structure.

Other researchers have constructed mediation models in an attempt to better understand the relationship between attachment style and college adjustment. Current evidence suggests that the relationship between attachment insecurity and college students' distress is mediated by maladaptive coping styles (Lopez, Mauricio, Gormley, Simko, & Berger, in press), cognitive appraisals of coping competence (Creasey & Hesson-McInnis, 2001), and tendencies to report more chaotic and disorganized self-experiences (Lopez, Fuendeling, Thomas, & Sagula, 1997; Lopez 2001). Of particular interest to the current study, Roberts, Gotlib, and Kassel (1996) found that the relationship between insecure attachment styles and depression was mediated by low self-esteem and dysfunctional attitudes in a college sample, including "rigid rules and unrealistic rules concerning self-worth." These cognitive patterns are similar to the cognitive patterns observed in maladaptive perfectionists.

In summary, a substantial body of literature supports the relationship between attachment styles and distinct patterns of coping, and cognitive and affective self-regulation. As noted earlier, contemporary adult attachment theory is described as primarily a theory of affect regulation. A prominent characteristic of maladaptive perfectionists involves critical deficits in self-regulation that can confound, possibly even inhibit, the successful pursuit of goals. Maladaptive perfectionists appear to share much in common with insecurely attached individuals, including low self-esteem. Thus, there is reason to expect an association between attachment and perfectionism, but this association has only been explored in the context of college students' student-parent attachment. (Rice & Mirzadeh, 2000).

The current study seeks to test a mediational model for predicting college adjustment. Cognitive and affective variables, including categorical thinking, emotional reactivity, perceived stress, and splitting are presumed to mediate the relationship between attachment styles, adaptive and maladaptive perfectionism, and multiple adjustment indicators. The literature on perfectionism and attachment suggests that cognitive appraisal and emotion management may be the key mediating links which help explain the perfectionism, attachment, and adjustment associations. Thus, we predict that adaptive perfectionism will be positively associated with concurrent indicators of late adolescent/young adult student adjustment (i.e., psychological symptoms; academic, social, and emotional adjustment). In comparison, insecure attachment styles and maladaptive perfectionism are expected to relate negatively to concurrent adjustment. Additionally, the direct effects of perfectionism and attachment style are expected to be

attenuated when accounting for cognitive-affective mediators (i.e. constructive thinking, emotional reactivity, perceived stress, and splitting).

Method

Participants

Participants were 109 (22 men and 87 women) undergraduates at a large midwestern university. They ranged in age from 18 to 41 (M= 20.27; SD=2.45). Subjects were recruited from classes in the College of Education and given extra credit for participation. Participants' race/ethnicity was: 6% Asian/Asian American, 7% Black/African American, 1% Latino/a, 82% European American, 1% multiracial, and 1% "other." Data were gathered from students in fall and spring semesters.

Instruments

Perfectionism. Three measures of perfectionism were used. The Multidimensional Perfectionism Scale (F-MPS; Frost et al., 1990) is a 35-item measure in which higher scores on each of 6 subscales indicate greater levels of perfectionism. The subscales are: Concerns over Mistakes (9 items) to assess negative reactions to errors, Personal Standards (7 items) that reflects one's high standards, Parental Expectations (5 items) that measures perceptions of standards set by parents, Parental Criticisms (5 items) to assess the perception that one's parents were overly critical, Doubts About Actions (4 items) to measure the degree of doubt in one's ability to accomplish tasks, and Organization (6 items) to measure the importance given to being orderly and organized (Frost et al., 1990). Respondents use a 5-point scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Cronbach's coefficient alpha ranged from .70 to .92 for the 6 subscales (Frost, Lahart, & Rosenblate, 1991). Concurrent and predictive validity was

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shown by several studies (see Frost et al., 1990; Hewitt et al., 1991; Rice & Mirzadeh, 2000). Correlations were found between the F-MPS subscales and measures of psychological symptoms, such as the Brief Symptom Inventory (Derogatis & Melisaratos, 1983) and behaviors such as compulsiveness and depression (Frost & Marten, 1990; Frost et al., 1990, 1993).

The Hewitt and Flett Multidimensional Perfectionism Scale (HF-MPS), a 45-item measure, taps three dimensions of perfectionism. Participants rate each item on a scale of 1 ("disagree") through 7 ("agree") (Hewitt et al., 1991). Three 15-item subscales are: Self Oriented Perfectionism to assess one's unrealistic standards and perfectionistic motivation, Socially Prescribed Perfectionism to measure the degree to which significant others expect one to be perfect, and Other Oriented Perfectionism to assess one's unrealistic standards and perfectionistic motivations for others. Higher total and subscale scores indicate higher levels of perfectionism. Cronbach's coefficient alpha for the subscales have ranged from .79 to .89, and test-retest reliabilities after 3 months were r = .75 to r = .88 (Hewitt & Flett, 1991). Factor analyses supported the dimensionality of the HF-MPS. Higher-order analyses found support for the self oriented dimension on a positive striving factor and found socially prescribed perfectionism to be related to maladaptive concerns (Frost et al., 1993). Convergent and discriminant validity studies have been done for all three subscales of the HF-MPS (Hewitt & Flett, 1991). In general, adequate evidence for their validity has been shown for both non-clinical and clinical samples (Hewitt et al., 1991).

The Almost Perfect Scale-Revised (APS-R; Slaney, Rice, Mobley, Trippi, & Ashby, 2001) is a 23-item self-report instrument to measure aspects of perfectionism on 3

subscales. The High Standards subscale (7 items) measures personal standards, the Order subscale (4 items) assesses organization and need for order, and the Discrepancy subscale (12 items) indicates the perceived discrepancy between ideal expectations and actual performance. Respondents use a 7-pont scale, from 1 ("Strongly Disagree") to 7 ("Strongly Agree") on each item. Greater scores indicate greater levels of perfectionism. Cronbach's coefficient alphas ranged from .85 to .92 for the subscales (Slaney et al., 2001). Confirmatory factor analyses supported the independent structure of the subscales (Slaney, Rice, & Ashby, 2002). Slaney et al. (2001) provided information on convergent and discriminant validity. The High Standards subscale has been shown to better predict self-esteem and grade point average than the Personal Standards subscale of the F-MPS (Slaney et al., 2001). Also, the Discrepancy subscale and correlations of depression and self-esteem have been comparable to correlations between the F-MPS Concern Over Mistakes subscale and the same indicators. Other research of college students has included both confirmatory and exploratory factor analyses (Slaney, et al., 2001; Slaney, Rice, & Ashby, 2002).

Adult Attachment Style. The Experiences in Close Relationships measure (ECR; Brennan, Clark, & Shaver, 1998) is a 36-item self-report instrument that examines two dimensions of attachment, avoidance and anxiety. Items are answered with a 7-point scale from 1, "Strongly Disagree", to 7, "Strongly Agree." Two 18-item subscales, "Avoidance" and "Anxiety", have Cronbach coefficient alphas of .94 and .91, respectively (Brennan et al., 1998). In a college sample, Lopez (2001) found strong associations between the subscales and measures of self concealment and disorganization.

In addition, with a sample of college freshmen, ECR subscales showed moderate stability coefficients over a 6-month period (Lopez & Gormley, 2001).

Cognitive-Affective Self-Regulation. Three measures assessed specific aspects of cognitive and affective self-regulation. The Categorical Thinking Scale, from the larger Categorical Thinking Inventory (CTI; Epstein & Katz, 1992; Epstein & Meier, 1989), measures thinking in "extreme, unmodulated, or rigid ways, as well as being judgmental and intolerant of others" (Epstein & Meier, 1989, p. 339). The Categorical Thinking Scale, a 16-item measure, uses a 5-point rating scale, from 1 ("Definitely False") to 5 ("Definitely True"), with higher scores indicative of greater degrees of categorical thinking. Cronbach's coefficient alpha ranges from .76 to .80 (Epstein & Katz, 1992; Epstein & Meier, 1989). This scale relates in expected directions with measures of self and other acceptance, as well as rejection, personalization, overgeneralization, and negative thinking (Epstein & Katz, 1992). The Categorical Thinking Scale does not measure a "purely intellectual process," but instead is linked to emotional reactivity and reactions concerning self and others (Epstein & Meier, 1989).

The Splitting Index (SI; Gould, Prentice, & Ainslie, 1996) is a 24-item self-report measure of the defense mechanism of splitting, based on expectations of self and others. On a 9-point scale, participants rate items from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). The SI is comprised of three 8-item subscales: "Self," to measure splitting of self-image, "Family," to measure splitting of the images of family members, and "Other," to measures the splitting of the images of other persons. Cronbach's coefficient alpha was .90 for the entire scale and reliabilities for the subscales were .84-.89 (Gould et al., 1996). The scores on the SI demonstrated convergent validity in correlating highly and positively

with measures of borderline and narcissistic personality disorders, depression, and negative reactivity. Discriminant validity was shown when the SI correlated significantly and negatively with social psychological measures of self-image stability and positive self-esteem. (Gould et al., 1996). In addition, test-retest correlations of the SI revealed high stability after a 4-week interval.

The Differentiation of Self Inventory (DSI; Skowron & Friedlander, 1998) is a 43-item self-report measure in which respondents use a 6-point scale (1, "Not at All True of Me," to 6, "Very True of Me") to assess differentiation of the self (Bowen, 1978) on 4 subscales: Emotional Reactivity, "I" Position, Emotional Cutoff, and Fusion with Others. For this study, we focused on the 11-item Emotional Reactivity subscale measuring "the degree to which a person responds to environmental conditions with emotional flooding, lability, or hypersensitivity" (Skowron & Friedlander, 1998, p. 239). Higher scores reflect more difficulty in staying calm in emotional situations, as well as a tendency to make decisions based on what "feels right." Cronbach's coefficient alpha ranges from .73 to .89 for this subscale (Skowron & Friedlander, 1998; Tuason & Friedlander, 2001). Validity studies showed this subscale to correlate significantly and positively with measures of symptomatic stress and global maladjustment. Furthermore, the Emotional Reactivity subscale significantly predicted trait anxiety (Skowron & Friedlander, 1998; Tuason & Friedlander, 2001).

Stress. The Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) is a 14-item self-report instrument that uses a 4-point scale (1 = "never" to 4 = "very often") to measure perceived life stress for the past 30 days. Higher scores indicate greater amounts of perceived stress during the past month. In 3 early studies (Cohen et al.,

1983), the coefficient alpha was .84-.86; in later studies, this coefficient was .74 and .81 (Chang, 2000; Chang & Rand, 2000). Concurrent validity of the PSS indicates significant positive correlations with life-event scales (Cohen et al., 1983; Cohen & Williamson, 1988). A study of predictive validity revealed that the PSS is strongly correlated with symptoms of depression (Cohen et al., 1983).

Adjustment to College. The Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1984) is a 67-item self-report questionnaire that addresses many experiences of college via 4 subscales. The Academic Adjustment subscale (24 items) measures how well a student is dealing with educational demands. The Social Adjustment subscale (20 items) assesses how well the student deals with interpersonal and social issues. The Personal-Emotional Adjustment subscale (15 items) examines how a student feels physically and emotionally to indicate the amount of psychological distress. The Goal Commitment/Institutional Affiliation subscale (15 items) assesses feelings about college attendance and commitment to achieving educational goals. Items are scored using a 9-point Likert-type scale (1 = "applies very closely to me" to 9 = "does not apply to me"). Greater scores on each subscale and on the entire SACQ indicate greater levels of adjustment. Cronbach's coefficient of alphas for the subscales were from .73 to .90 (Baker & Siryk, 1984, 1986; Lapsley, Rice, & FitzGerald, 1990). Criterion validity was established by examination of subscales and critical events in the college experience. For example, significant negative correlations were found between SACQ subscales and college attrition; significant positive correlations were found between SACQ subscales and student grades (GPA) and involvement in social activities (Baker & Siryk, 1984; 1986).

Psychological Adjustment. The Brief Symptom Inventory (BSI; Derogatis,1993) is a 53-item self-report measure of psychological distress. Nine dimensions of the BSI, based on symptom constructions, and 3 global distress subscales comprise this scale. All items are scored using a Likert-type scale from 0 ("Not at All") to 4 ("Extremely"). The symptom dimensions are Somatization (7 items), Obsessive-Compulsive (6 items), Interpersonal Sensitivity (4 items), Depression (6 items), Anxiety (6 items), Hostility (5 items), Phobic Anxiety (5 items), Paranoid Ideation (5 items), and Psychoticism (5 items). The BSI global distress indices are the Global Severity Index (GSI), Positive Symptom Total (PST) and Positive Symptom Distress Index (PSDI). In this study, the GSI, which provides a measure of overall psychological functioning, was used. Higher scores on this subscale indicate greater psychological maladjustment. Hayes' (1997) study of university students showed internal consistency from .70 (Phobic Anxiety) to .89 (Depression). Test-retest reliability over a 2-week period ranged from .68-.91 on the BSI subscales, with the GSI correlation at .90. Convergent validity studies showed high correlations of the BSI and MMPI (Derogatis, Rickels, & Rock, 1976) and the BSI and SCL-90R (Derogatis, 1993). With college students, subscales of the BSI were found to be significantly and inversely related to social support (Sandler & Barrera, 1984).

Results

Descriptive Statistics

Descriptive statistics for measures are presented in Table 1 and include the scale ranges, means, standard deviations, and instrument reliability estimates. Cronbach's coefficient alpha ranged from .84 to .95 and yielded considerable confidence in the

internal consistency of the measures. Overall, the descriptive statistics were comparable to other studies using these measures with college student samples.

Preliminary Analyses

To determine if it was necessary to control for any variables during the analysis of mediation, correlations (with age) and tests of mean differences (between gender) were examined for the predictor, criterion and mediator variables. A Bonferroni adjustment for significance level was made for the tests of the 12 correlations with age (.05/12=.004). Those correlations ranged from |.06| to .|.29|, and only the correlation with Perceived Stress ($r = .-29$, $p < .002$), was statistically significant.

A multivariate analysis of variance (MANOVA) was used to explore any significant differences between men and women on the 12 variables of interest. The result of the MANOVA indicated possible differences between the groups, $F (12, 94) = 2.44$, Wilks's = 0.76, $p < .008$, 2 = .24. Univariate analyses of variance revealed a significant gender difference only for emotional reactivity, $F (1, 105) = 12.55$, $p < .001$, 2 = .11. The direction of that effect indicated that women ($M = 42.78$, $SD = 13.02$) obtained higher average scores than men ($M = 33.27$, $SD = 10.72$). Because only two differences emerged when examining demographic variables (which is about what would be expected by chance), we decided not to control for age or gender in the major analyses.

Adaptive and Maladaptive Perfectionism Dimensions

To reduce the number of variables for analysis, adaptive and maladaptive perfectionism dimensions were created using subscales from the Frost et al. (1990) MPS, the Hewitt and Flett (1991) MPS, and the Slaney et al. (2001) APS-R. We followed procedures in other studies that have found support for two higher order factors of

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adaptive perfectionism, or positive achievement striving, and maladaptive perfectionism or maladaptive evaluation concerns (e.g., Dunkley et al., 2000; Frost et al., 1993; Rice et al., 1998). We conducted a principal axis factor analysis with oblique rotation on the 12 subscales from our perfectionism scales. Two factors were extracted with eigenvalues greater than 1.0. The factors were minimally correlated (.15). Coefficients from the pattern matrix for this analysis are displayed in Table 2. One factor had large coefficients on subscales such as Concerns over Mistakes, Doubts About Actions, and Socially Prescribed Perfectionism, suggesting this factor could be labeled Maladaptive Perfectionism. The other factor had large coefficients for subscales such as Personal Standards, Organization, and Order, and could be labeled Adaptive Perfectionism. The factor scores from this analysis were saved and used in subsequent analyses.

Attachment, Perfectionism, and Student Adjustment

Regression analyses were conducted to determine whether the cognitive-affective variables mediated the relationship between perfectionism, attachment, and the indicators of student adjustment. In these analyses, the two attachment subscales (Avoidance and Anxiety) and the two perfectionism dimensions (factor scores of Maladaptive and Adaptive Perfectionism) were the predictors, the primary outcomes or dependent variables were the adjustment subscales from the SACQ and the Global Severity Index from the BSI, and the mediators were categorical thinking, emotional reactivity, perceived stress, and the three splitting subscales. A summary of relevant statistics for these analyses appears in Table 3.

Procedures for testing mediation described by Baron and Kenny (1986) and Holmbeck (1997) were used. Initially, in separate regression analyses, the four criterion

variables were regressed on the four predictor variables. Avoidant attachment did not significantly relate to any of the criterion variables. Conversely, anxious attachment was a significant predictor of each criterion variable. As expected, anxious attachment was negatively related to measures of healthy adjustment and positively related to the Global Severity Index. Maladaptive perfectionism was negatively related to both personal-emotional adjustment and academic adjustment, and positively related to the Global Severity Index. Maladaptive perfectionism was not significantly related to social adjustment. Adaptive perfectionism was positively related to academic adjustment and social adjustment. It was not, however, related to personal-emotional adjustment or the Global Severity Index.

Predictor Variables Predicting Mediators

Avoidant and anxious attachment and maladaptive and adaptive perfectionism were each regressed on each of the four potential mediator variables: categorical thinking, emotional reactivity, perceived stress and splitting. The standardized betas and levels of significance are summarized in Table 4.

Avoidant attachment did not significantly relate to any of the potential mediators. In comparison, anxious attachment was significantly and positively related to three of the four potential mediators, including emotional reactivity, perceived stress, and splitting, with respective standardized betas of .57, .43 and .35. Anxious attachment was not significantly related to categorical thinking ($p = .053$).

Maladaptive perfectionism was also significantly related to three of the four potential mediators. Maladaptive perfectionism was positively related to categorical thinking, perceived stress, and splitting, with standardized betas of .32, .25, and .38

respectively. Maladaptive perfectionism was not significantly related to emotional reactivity ($p = .346$). In contrast, adaptive perfectionism was only related to categorical thinking (standardized beta = .20).

Mediators Predicting Criterion Variables

In the next step in the analyses, each of the criterion variables was regressed on each of the potential mediator variables. The results indicate that two of the potential mediators, perceived stress and splitting, were related to all criterion variables in expected directions. Specifically, perceived stress and splitting were significantly and inversely related to personal-emotional, academic, and social adjustment. Additionally, perceived stress and splitting were significantly, positively associated with GSI. In comparison, categorical thinking was found to have significant, negative relationships with academic and social adjustment, while emotional reactivity demonstrated significant and inverse relationships with personal-emotional adjustment and GSI. Table 5 summarizes these findings.

Mediation

Baron and Kenney's 1986 article states mediation exists in models meeting the prerequisites when the relationship between the predictor and the criterion ceases to be significant in the presence of the mediating variable. Table 6 summarizes the differences in standardized betas and p values. If a significant relationship continues to exist between the predictor and criterion after the addition of the mediator to the regression, then partial mediation may exist.

Discussion

Relationships Between Attachment, Perfectionism, and Adjustment

This study was designed to examine potential mediators of the relationship among four predictors- avoidant attachment, anxious attachment, maladaptive perfectionism, and adaptive perfectionism; and four criterion variables- personal-emotional adjustment, academic adjustment, social adjustment, and an index of distress referred to as global severity. Potential mediators tested included the following cognitive/affective constructs: categorical thinking, emotional reactivity, perceived stress and splitting. We expected avoidant attachment, anxious attachment, and maladaptive perfectionism to negatively relate to measures of adjustment (i.e., personal-emotional, academic, and social adjustment) and positively relate to the GSI. Previous research has indicated that both insecure attachment and maladaptive perfectionism are associated with psychological difficulties (Rice & Mirzadeh, 2000). In contrast, we hypothesized that adaptive perfectionism, given its associations with psychological well-being, would be positively associated with personal-emotional, academic, and social adjustment, and negatively related to global severity.

Of our predicted relationships, only anxious attachment consistently related to the criterion variables in the predicted direction. Anxious attachment was negatively related to personal-emotional, social, and academic adjustment, and positively related to the Global Severity Index. As expected, maladaptive perfectionism was significantly and inversely related to personal-emotional, and academic adjustment, and significantly and positively associated with global severity. However, maladaptive perfectionism was not significantly related to social adjustment. The effect size may have been too small to be

detected in our sample. Alternatively, maladaptive perfectionists tend to exhibit socially-prescribed forms of perfectionism and strong social desirability tendencies. Thus, maladaptive perfectionists' desire to meet social expectations in conjunction with concerns about mistakes may result in maladaptive perfectionists reporting better social adjustment than they are actually experiencing

Adaptive perfectionism was significantly and positively related to academic and social adjustment, but was not related to personal-emotional adjustment or psychological symptoms measured by the GSI. Although the lack of relationships between adaptive perfectionism and personal-emotional adjustment, and between adaptive perfectionism and GSI were unexpected, these results may indicate the ability to maintain high standards without a deleterious effect on emotional health. For example, "personal standards" perfectionism, a subtype of adaptive perfectionism, has been found be related to an active style of coping (Dunckley et al., 2000). It may also be the case that the effects of adaptive perfectionism are more domain specific than global. For example, Rice and Mirzadeh (2000) found that adaptive perfectionism facilitated the academic adjustment of college students, but no relationship was found between adaptive perfectionism and social activities or interpersonal relationships. Future research should continue to explore the relationship between adaptive perfectionism and multiple realms of adjustment.

Avoidant attachment did not significantly relate to any of the criterion variables. We speculate that the lack of relationship between avoidant attachment and indexes of adjustment are due to our method of data collection and our small sample size. It seems probable that avoidantly attached individuals would be reluctant to voluntarily participate, and we relied on a volunteer sample.

Relationships Between Attachment, Perfectionism, and Cognitive/Affective Self-Regulation

The development of secure versus insecure attachment and adaptive versus maladaptive perfectionism is theoretically influenced by the quality of parent-child interactions occurring early in life (Bowlby, 1988; Hamachek, 1978). Individuals who experience consistent, affirming and flexible interactions with caregivers appear to develop resilience to psychological distress later in life. Conversely, individuals who experience inconsistent, rigid, or ego-dystonic caregiver interactions appear to be more vulnerable to psychological distress. The mechanisms believed to be responsible for the development of resilience and vulnerability are hypothesized to have cognitive and affective components. Consequently, our selection of assumed mediators captured aspects of these elements.

Categorical thinking, as measured, assesses both cognitive and emotional processes. Individuals employing categorical thinking are more likely to view the world as an "either-or" dichotomy (i.e., less likely to view external events on a continuum) and are more likely to be judgmental and intolerant of others. Categorical thinking is associated with psychological conditions such as depression and borderline personality disorder. We hypothesized that avoidant attachment, anxious attachment, and maladaptive perfectionism would demonstrate a positive relationship with categorical thinking. We also hypothesized that adaptive perfectionism would negatively correlate with categorical thinking. Our findings only partially supported this prediction. Both perfectionism dimensions were significantly and positively related to categorical thinking, although neither of the attachment types was significantly related. Interestingly, adaptive

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perfectionism related to categorical thinking such that higher levels of adaptive perfectionism related to higher levels of categorical thinking. Given that adaptive perfectionism is associated with psychological well being, while categorical thinking is not, it may be the case that although adaptive perfectionists employ this type of thinking, they also utilize other less extreme forms of thinking. Alternatively, they may possess other characteristics that ameliorate potential deficits associated with categorical thinking. Furthermore, our findings suggest that increased adjustment problems are associated with anxious attachment, but these two variables are not linked via categorical thinking. Avoidant attachment was not significantly associated with categorical thinking or any of the other potential mediators. It was therefore dropped from further analysis.

Borrowing from the work of Murray Bowen (1978), the measure of emotional reactivity evaluates levels of emotional "overload," or the degree to which an individual responds to environmental stimuli with hypersensitivity or emotional liability. Given the deleterious effects of extreme emotions on decision-making and ability to act, it was hypothesized that emotional reactivity would correlate positively with avoidant, anxious and maladaptive predictors, and negatively correlate with adaptive perfectionism. Among our predictions, only the relationship between anxious attachment and emotional reactivity was supported. Explanations for the lack of relationship between adaptive and maladaptive perfectionism and emotional reactivity are intriguing and worthy of further study. Although other research has demonstrated associations with anxiety, shame, and stress (Baden & Smith, 1998; Chang, 2000; Flett, Hewitt, Blankstein, & Gray, 1998), our findings suggest perfectionists are not easily emotionally overwhelmed.

Perceived stress was examined next. Rather than solely measuring external stress levels, this measure examined perceived stress over the last month. Perceived stress was predicted to positively correlate with insecure attachment types and maladaptive perfectionism, and negatively correlate to adaptive perfectionism. Our analysis showed only anxious attachment and maladaptive perfectionism related significantly in the predicted direction. Avoidant attachment and adaptive perfectionism were not significantly related to perceived stress. Chang (2000) used an abbreviated version of the PSS and found perfectionism, as measured by the MPS (Frost et al., 1990), related to stress. Our findings confirm Chang's findings with respect to maladaptive perfectionism. However, the lack of a relationship between adaptive perfectionism and stress potentially suggests a wide variability in the amount of perceived stress experienced by adaptive perfectionists, less awareness of stress, or that stress is unlikely to be evident among adaptive perfectionists. Future research may be able to more precisely tease apart these nuances.

Splitting is a concept associated with an unstable self-image. The presence of splitting suggests the lack of a solid, or core, sense of self and, in extreme forms, is typically associated with borderline and narcissistic personality disorders. This lack of a unified self may increase fluctuations in one's self-assessment depending on self-relevant thoughts or the perceived thoughts of others. Splitting is associated with negative psychological states and therefore was predicted to correlate positively with insecure attachment and maladaptive perfectionism and to correlate negatively with adaptive perfectionism. Again, our predictions were only partially supported. Consistent with expectations, splitting was positively associated with anxious attachment and maladaptive

perfectionism. Although the link between insecure or anxious adult attachment and splitting has been demonstrated in other studies (e.g., Lopez, 2001), to our knowledge, no study of perfectionism has examined splitting as a possible defensive posture. Our findings suggest that maladaptive perfectionists and anxious adult attachment style may belie a more fundamental disruption in self-development, to the point that primitive psychological defenses, such as splitting, are deployed to preserve an otherwise fragile sense of self.

Cognitive/Affective Self-Regulation as a Mediator of the Relationship Between Attachment, Perfectionism and Adjustment Outcomes

Contemporary adult attachment theory provided several putative cognitive and affective mechanisms to better understand the mechanisms by which adult attachment and perfectionism affect various aspects of psychological functioning. Consistent with theoretical expectations, we found a significant influence of cognitive/affective factors in the relationship between attachment and adjustment, and in the relationship between perfectionism and adjustment in college students. We also found cognitive/affective factors significantly influence the relationship between attachment and psychological distress, and the relationship between perfectionism and psychological distress, as measured by the GSI.

Two results from this study are of particular interest. First, avoidant attachment and adaptive perfectionism models were eliminated from the mediation analyses. Avoidant attachment was insignificantly related to all of the criterion variables and all of the proposed mediators. Future research can address our hypotheses that sample size and

data collection methods may have accounted for the absence of significant associations between avoidant attachment and the other variables.

Adaptive perfectionism was also eliminated from mediational analyses because it significantly related to only two criterion variables- academic and social adjustment, and one mediational variable, categorical thinking. Although categorical thinking did not act as a mediator in the relationship between adaptive perfectionism and academic adjustment or social adjustment, it was found to act as a suppressor variable in each of the models. This suggests that the relationships between adaptive perfectionism and academic or social adjustment are strengthened in the presence of categorical thinking. It is possible that categorical thinking, although typically considered maladaptive, may also reflect high, albeit rigid standards with clear cognitive differentiation between right and wrong, good and bad.

The second finding worthy of comment is the similarity between mediational models of maladaptive perfectionism and adjustment, and anxious attachment and adjustment. The results indicate splitting and perceived stress play similar roles in both of these mediation models. More specifically, perceived stress was found to fully mediate the relationship between anxious attachment and academic adjustment, social adjustment, and global psychological distress; splitting also fully mediated these models. Additionally, both perceived stress and splitting acted as partial mediators in the relationship between anxious attachment and personal emotional adjustment. Finally, both perceived stress and splitting acted as full mediators between maladaptive perfectionism and emotional adjustment, as well as between maladaptive perfectionism and academic adjustment. Splitting fully mediated the relationship between maladaptive

perfectionism and global psychological distress, while perceived stress acted as a partial mediator. The correlation between the Perceived Stress scale and the Splitting Index was substantial (r =.61), which may account for these similarities.

These findings have potential applications for the treatment of individuals who are anxiously attached or have maladaptive perfectionism traits when the goal of treatment is to improve adjustment outcomes. Perceived stress and splitting acted as full mediators in most relationships and a partial mediator in others, suggesting that appraisal is a critical element in the stress experienced by these individuals and may be a major factor contributing to poor adjustment outcomes. Borrowing from the work of Snyder and Mann (2001), it may be that the increase in perceived stress is due to construing the stressors as more aversive or threatening than they are actually. It is also possible that these individuals are unable to adequately appraise potential responses to the stressor. Our findings suggest interventions aimed at modifying perceived stress so that it is more congruent with reality are likely to beneficial. Possible interventions include helping the individual to become aware of faulty appraisals which magnify or intensify the stressor, and teaching methods for a more accurate assessment. It may also be necessary to identify potential resources, both physical and psychological, for dealing with the stressor. Self-referential affirmations such as "I am able__" or "I can __" may also be beneficial. Other interventions to decrease the physiological levels of stress experienced, such as meditation and progressive relaxation, could also be considered. Given the enduring nature of internal working models, Meichembaum and Jaremko's (1982) finding that training in stress reduction not only helps the immediate situation, but also aids in the prevention of future stress, is poignant.

Limitations

Although this research found support for relationships between attachment, perfectionism and various measures of adjustment and cognitive/affective variables, its ex post facto design prevents cause and effect conclusions. It is therefore left for future research, possibly employing experimental designs or longitudinal tracking, to establish these types of relationships. Our sample size, reliance on volunteers, and limitations in terms of generalizability to diverse groups also represent limitations that can be improved upon in future studies.

Conclusions

We found several cognitive/affective factors that mediate relationships between anxious attachment or maladaptive perfectionism and poor adjustment in personal-emotional, social and academic areas. We also found evidence of association between these same factors and poor psychological states. This study adds to a growing corpus of research supporting associations between anxious attachment or maladaptive perfectionism and poor adjustment and psychological difficulties. Perhaps more importantly, however, it also adds support for the use of contemporary adult attachment theory as a framework for examining perfectionism and cognitive/affective self-regulation.

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Table 1

Measurement Descriptive Statistics

Subscale	Range	M	SD	α
Avoidant Attachment	18 to 104	51.39	21.52	.95
Anxious Attachment	18 to 118	64.65	21.30	.92
Academic Adjustment	80 to 212	150.72	29.26	.90
Social Adjustment	59 to 149	111.16	19.57	.90
Personal-Emotional Adjustment	42 to 133	88.40	20.92	.85
Global Severity Index	0 to 2.83	.77	0.62	.97
Categorical Thinking	16 to 71	37.76	9.14	.84
Emotional Reactivity	11 to 66	40.92	11.74	.90
Perceived Stress	4 to 42	25.35	7.35	.84
Splitting Index	24 to 84	48.91	13.24	.90
Self-Splitting	8 to 36	21.14	6.95	.88
Other-Splitting	8 to 35	15.34	5.64	.88

Table 2

Structure Coefficients (Pattern Matrix) from the Principal Axis Factor Analysis of the Perfectionism Scales

	Factor 1	Factor 2
Perfectionism Subscale	Maladaptive Perfectionism	Adaptive Perfectionism
Concerns over Mistakes	.75	.11
Personal Standards	.37	.61
Parent Expectations	.62	.03
Parent Criticism	.68	-.20
Doubts About Actions	.63	.01
Organization	-.41	.77
Discrepancy	.59	-.03
High Standards	.20	.59
Order	-.29	.78
Self-Oriented Perfectionism	.45	.65
Other-Oriented Perfectionism	.28	.42
Socially Prescribed Perfectionism	.77	.12

Table 3

Regression Analyses of Attachment and Perfectionism Predicting Student Adjustment

Criterion	Predictors	B	SE B	β
Personal-Emotional Adjustment				
	Avoidant Attachment	-.01	.077	-.01
	Anxious Attachment	-.47	.092	-.48***
	Maladaptive Perfectionism	-5.76	2.08	-.26**
	Adaptive Perfectionism	2.50	1.69	.11
Academic Adjustment				
	Avoidant Attachment	.03	.12	.02
	Anxious Attachment	-.36	.14	-.26*
	Maladaptive Perfectionism	9.25	3.23	-.30**
	Adaptive Perfectionism	11.53	2.62	.37***
Social Adjustment				
	Avoidant Attachment	.04	.08	.03
	Anxious Attachment	-.31	.10	-.33**
	Maladaptive Perfectionism	2.92	2.30	-.14

	Adaptive Perfectionism	7.33	1.84	.35***
Global Severity Index				
	Avoidant Attachment	.001	.002	.08
	Anxious Attachment	.01	.003	.35***
	Maladaptive Perfectionism	.22	.07	.33***
	Adaptive Perfectionism	.02	.05	.03

*** $p < .001$; ** $p < .01$; * $p < .05$.

Table 4

Predictor Variables Predicting Mediators

Predictor Variable	β	Mediator
		Categorical Thinking
Avoidant Attachment	.15	
Anxious Attachment	.20	
Maladaptive Perfectionism	.32**	
Adaptive Perfectionism	.20*	
		Emotional Reactivity
Avoidant Attachment	.01	
Anxious Attachment	.57***	
Maladaptive Perfectionism	.10	
Adaptive Perfectionism	.06	
		Perceived Stress
Avoidant Attachment	-.001	
Anxious Attachment	.43***	
Maladaptive Perfectionism	.25*	
Adaptive Perfectionism	-.10	
		Splitting
Avoidant Attachment	.04	
Anxious Attachment	.35***	
Maladaptive Perfectionism	.38***	
Adaptive Perfectionism	-.13	

***p<.001; **p<.01; *p<.05

Table 5

Mediators Predicting Criterion Variables (Predictor Variables Present)

Criterion Variable	β	Mediator
		Categorical Thinking
Personal-Emotional Adjustment	-.11	
Academic Adjustment	-.24*	
Social Adjustment	-.29**	
Global Severity Index	.11	
		Emotional Reactivity
Personal-Emotional Adjustment	-.37***	
Academic Adjustment	-.11	
Social Adjustment	-.20	
Global Severity Index	.32**	
		Perceived Stress
Personal-Emotional Adjustment	-.52***	
Academic Adjustment	-.53***	
Social Adjustment	-.40***	
Global Severity Index	.45***	
		Splitting
Personal-Emotional Adjustment	-.48***	
Academic Adjustment	- 30**	
Social Adjustment	-.42***	
Global Severity Index	.50***	

***p<.001; **p<.01; *p<.05

Table 6

Comparison of Std B and Significance Without and With the Mediator in the Equation

	Predictor-Criterion	Predictor-Criterion with Mediator	
Pathway	β	β	Mediator
Mal-AA	-.30**	-.22*	Categorical Thinking
Anx-PEA	-.48***	-.27**	Emotional Reactivity
Anx-GSI	.35***	.18	Emotional Reactivity
Anx-PEA	-.48***	-.26**	Perceived Stress
Mal-PEA	-.26**	-.13	Perceived Stress
Anx-AA	-.26*	-.03	Perceived Stress
Mal-AA	-.30**	-.17	Perceived Stress
Anx-SA	-.33**	-.17	Perceived Stress
Anx-GSI	.35***	.16	Perceived Stress
Mal-GSI	.33***	.27*	Perceived Stress
Anx-PEA	-.48***	-.32***	Splitting
Mal-PEA	-.26**	-.08	Splitting
Anx-AA	-.26*	-.15	Splitting
Mal-AA	-.30**	-.18	Splitting
Anx-SA	-.33**	-.17	Splitting
Anx-GSI	.35***	.18	Splitting
Mal—GSI	.33***	.14	Splitting

***p<.001; **p<.01; *p<.05

Note: Predictor variables include maladaptive perfectionism (Mal) and anxious attachment (Anx). Criterion variables include personal-emotional (PEA), academic (AA), and social (SA) adjustment, and the Global Severity Index (GSI).

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